

IN THE CLAIMS:

Please AMEND claims 1, 11, and 22, as shown below.

Please CANCEL claims 23-30, without prejudice or disclaimer.

1. (Currently Amended) A method, comprising:

mapping each received packet to at least one of a plurality of queues, wherein the mapping is based on a kind of data included with each of the received packet;

providing a threshold that is compared to a differential that represents loading differences between a queue associated with the kind of data included in the received packet and another queue that is unassociated with the kind of data included in the received packet, wherein the queue associated with the kind of data included in the received packet is overloaded when the differential exceeds the threshold;

when the differential exceeds the threshold, and operational logic is valid, automatically changing the mapping of the received packet from the queue to the other queue, wherein the other queue is less loaded than the queue associated with the kind of data included in the received packet when the differential exceeds the threshold; and

forwarding each of the received packet in each said queue along a path towards the final destination, wherein the ordering of the forwarding of each of the received packet is in accordance with a weight associated with each said queue.

2. (Previously Presented) The method of Claim 1, wherein the received packet is one of an internet protocol packet and an asynchronous transfer mode packet.

3. (Previously Presented) The method of Claim 1, further comprising:
providing the weight for each said queue that is associated with each kind of data,
wherein resources for forwarding each of the received packet in each said queue are allocated in accordance with each weight provided to each said queue, and
wherein the weight associated with each said queue is unchanged during the forwarding.

4. (Previously Presented) The method of Claim 1, further comprising:
employing a remapping equation to determine when the differential exceeds the threshold and the operational logic is valid.

5. (Previously Presented) The method of Claim 1, wherein the operational logic determines when both a forwarding priority value and a traffic aggregation value are greater for the received packet initially mapped to the queue associated with the kind of data included with the received packet than another forwarding priority value and another traffic aggregation value associated with each of the received packet in the other queue that is unassociated with the kind of data included in the received packet.

6. (Previously Presented) The method of Claim 1, further comprising:

enabling automated provisioning of at least one of a forwarding priority value, traffic aggregation value and weight for each said queue based on the kind of data included in each of the received packet.

7. (Original) The method of Claim 1, further comprising:

enabling the threshold to be set to a sufficiently large value to prevent overloading of the other queue caused by relatively frequent changing of the mapping of received packets to the other queue.

8. (Original) The method of Claim 1, further comprising:

employing a connection associated with the received packet to determine the kind of data included in the received packet.

9. (Original) The method of Claim 1, further comprising:

examining the content of the received packet to identify the kind of data included in the received packet.

10. (Original) The method of Claim 1, wherein the mapping is based on Diffserv code points.

11. (Currently Amended) A router, comprising:

a transceiver configured to receive and transmit each packet over each network coupled to the router;

a mapper configured to map each received packet to at least one of a plurality of queues based on a kind of data included with each of the received packet;

a remapper configured to compare a provided threshold to a differential that represents loading differences between a queue associated with the kind of data included in the received packet and another queue that is unassociated with the kind of data included in the received packet, wherein the queue associated with the kind of data included in the received packet is overloaded when the differential exceeds the threshold wherein the remapper is configured to change automatically the mapping of the received packet from the queue to the other queue when the differential exceeds the threshold, and operational logic is valid, wherein the other queue is less loaded than the queue associated with the kind of data included in the packet when the differential exceeds the threshold; and

a scheduler configured to forward each of the received packet in each said queue along a path towards the final destination, wherein the scheduler is configured to order the forwarding of each received packet in accordance with a weight associated with each said queue.

12. (Original) The router of Claim 11, further comprising:

a base station that includes a wireless transceiver for wirelessly communicating with mobile devices and other base stations, wherein the router is internal to the base station.

13. (Previously Presented) The router of Claim 11, further comprising:

a classifier for determining the kind of data included in each of the received packet.

14. (Original) The router of Claim 13, wherein the classifier is configured to employ a connection associated with the received packet to determine the kind of data included in the received packet.

15. (Original) The router of Claim 13, wherein the classifier is configured to examine the content of the received packet to identify the kind of data included in the received packet.

16. (Previously Presented) The router of Claim 11, further comprising:

a weighter configured to enable a weight to be provided for each said queue that is associated with each kind of data, wherein resources for forwarding each of the received packet in each said queue are allocated in accordance with each of the weight provided to each said queue.

17. (Original) The router of Claim 11, wherein the threshold is set to a value sufficiently large to prevent overloading of the other queue caused by relatively frequent changing of the mapping of received packets to the other queue.

18. (Previously Presented) The router of Claim 11, wherein the operational logic is configured to determine when both a forwarding priority value and a traffic aggregation value are greater for the received packet initially mapped to the queue associated with the kind of data included with the received packet than another forwarding priority value and another traffic aggregation value associated with each of the received packet in the other queue that is unassociated with the kind of data included in the received packet.

19. (Previously Presented) The router of Claim 11, further comprising:
a provisioner configured to provide automatically at least one of a forwarding priority value, traffic aggregation value and weight for each said queue based on the kind of data included in each of the received packet.

20. (Original) The router of Claim 11, wherein the mapping is based on Diffserv code points.

21. (Original) The router of Claim 11, wherein the packet is one of an internet protocol packet and an asynchronous transfer mode packet.

22. (Currently Amended) An apparatus, comprising:

means for mapping each received packet to at least one of a plurality of queues, wherein the mapping is based on a kind of data included with each of the received packet;

means for providing a threshold that is compared to a differential that represents loading differences between a queue associated with the kind of data included in the received packet and another queue that is unassociated with the kind of data included in the received packet, wherein the queue associated with the kind of data included in the received packet is overloaded when the differential exceeds the threshold;

means for automatically changing the mapping of the received packet from the queue to the other queue when the differential exceeds the threshold, and operational logic is valid, wherein the other queue is less loaded than the queue associated with the kind of data included in the packet when the differential exceeds the threshold; and

means for forwarding each of the received packet in each said queue along a path towards the final destination, wherein the ordering of the forwarding of each of the received packet is in accordance with a weight associated with each said queue.

23-30 (Canceled)